

State of Colorado
Oil and Gas Conservation Commission

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CUMULATIVE IMPACTS DATA IDENTIFICATION

Per Rule 303, this form and all required components and attachments will be submitted for any Oil and Gas Development Plan.

Form Type: ☒ OGD ☐ Partial 2B - Rule 803.b.(2).A UIC Conversion

OPERATOR INFORMATION

OGCC Operator Number: 10243

Name of Operator: GMT EXPLORATION COMPANY LLC

Address: 4949 S NIAGARA ST SUITE 250

City: DENVER State: CO Zip: 80237

Contact Name and Telephone:

Name: Maxwell Blair

Phone: (303) 586-9291

Email: mblair@gmtexploration.com

OIL & GAS DEVELOPMENT PLAN INFORMATION

Oil & Gas Development Plan Name: Ragged 6-64 4

Oil & Gas Development Plan Docket #:

Oil & Gas Development Plan ID #:

Docket Number

221000276

Data not required

☐ This OGD is included in a Comprehensive Area Plan. CAP ID #: _____

OIL & GAS LOCATION DATA

1 Oil & Gas Location Name: Ragged

Number: 6-64 4

Status: Active, unbuilt

OIL & GAS LOCATION INFORMATION

Form 2A Doc#: 403090768

Loc ID#:

Oil & Gas Location: QTRQTR: 1 Sec: 4 Twp: 6S Rng: 64W Meridian: 6

Total number of wells planned: 20

Operations Duration

Estimated total number of weeks to construct this Oil & Gas Location: 6

Estimated total number of weeks to drill all planned wells for this Oil & Gas Location: 30

Number of planned drilling occupations to drill all planned wells for this Oil & Gas Location: 1

Estimated total number of weeks to complete all planned wells for this Oil & Gas Location: 30

Number of planned completions occupations to complete all planned wells for this Oil & Gas Location: 1

Will there be simultaneous drilling and completions operations occurring at this Oil & Gas Location? No

Estimated total number of months the Oil & Gas Location will be active, prior to abandonment and reclamation: 240

Noise Impacts

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

Receptors to noise impacts will be the nearby Residential Building Units which are more than 2,000' from the location. Noise originating from pre-production operations should not increase the ambient noise in the surrounding area. The location is greater than 1 mile to any High Priority Habitat. Species may be temporarily impacted by increased noise levels. However, there is sufficient habitat nearby for species to inhabit temporarily to avoid the nuisance.

Provide a qualitative evaluation of the incremental adverse noise impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

Noise originating from production operations should not increase the ambient noise in the surrounding area.

Light Impacts

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

Receptors to noise impacts will be the nearby Residential Building Units which are more than 2,000' from the location. The location is greater than 1 mile to any High Priority Habitat. Species may be temporarily impacted by increased noise levels. However, there is sufficient habitat nearby for species to inhabit temporarily to avoid the nuisance.

Provide a qualitative evaluation of the incremental adverse light impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

There will be minimal light impacts during production operations. It is expected that the permanent lighting utilized during Production Operations will not exceed the maximum permissible light level of 2.5 lumens per square foot (LM/SF) of the total WPS.

Odor Impacts

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the pre-production activities at this Oil & Gas Location.

There will be a temporary increase in odors during pre-production operations from equipment and traffic exhaust and fluid management during drilling and completions operations.

Provide a qualitative evaluation of the incremental adverse odor impacts to the surrounding receptors during the production stage of this Oil & Gas Location.

There will be minimal odor impacts during production operations.

WATER RESOURCES

☒ This Oil & Gas Location is listed as a sensitive area for water resources.

☒ This Oil & Gas Location is within 2,640 feet of a surface Water of the State.

Estimated depth to groundwater: 32

Estimated total planned on-location storage capacity of the Oil & Gas Location for:

	Number of Tanks	Total Volume (bbls)
Oil	<u>10</u>	<u>5000</u>
Condensate	<u>0</u>	<u>0</u>
Produced Water	<u>4</u>	<u>2000</u>
Other volumes of stored fluids, hydrocarbons, chemicals, or E&P Waste Fluids	<u>0</u>	<u>0</u>

List, with volumes, the "Other" fluids planned to be stored on the Oil & Gas Location, including, but not limited to: hydrocarbons, chemicals, or E&P Waste fluids.

N/A

Potential Impacted Surface Water Resources

Provide the distance and direction of the contaminant migration pathway from the Oil & Gas Location to the nearest downstream riparian corridors, wetlands, and surface Waters of the State. Also provide an evaluation of the baseline condition of the nearest downstream riparian corridors, wetlands, and surface Waters of the State.

Enter 2,640 for distances greater than 1/2-mile. Distances are measured along the migration pathway, not a straight line from the edge of the Oil & Gas Location.

	Distance	Direction	Evaluation of Baseline Condition
Riparian Corridor	<u>2640</u>	<u>W</u>	<u>There are no Riparian Corridor within 2,640' of the Working Pad Surface.</u>
Wetland	<u>2640</u>	<u>E</u>	<u>There are no wetlands within 2,640' of the Working Pad Surface.</u>

Potential Impacts to Public Water Resources

Provide the distance, direction, and evaluation of potential impacts to the nearest Public Water System Intake. Enter 5,280 for distances greater than 1-mile.

Distance Direction Evaluation of Baseline Condition

Public Water System Intake 5280 NW Not Applicable

Estimated Water Usage

Provide the estimated total volumes of the following that are anticipated to be used during the drilling and completions stage of the Oil & Gas Location activity.

Water Source	Volume (bbls)		Volume (bbls)		Volume (bbls)			
Surface Water	3000000	Recycled Water (Produced Water)	0	Unspecified Source	0	Percentage	0	%
Ground Water	9000000	Recycled Water (non-Produced Water)	0	Total Water Usage	12000000	Recycled Water		

If an unspecified water source is planned to be used, provide a description of the source.

Water is sourced through the Rangeview Metropolitan District. Percentages of Water source will vary depending on time of year.

Evaluate the measures being taken to reduce freshwater use, including reusing and recycling produced water.

N/A

ECOSYSTEM & WILDLIFE RESOURCES

List High Priority Habitats (HPH) that occur within one mile of the Oil & Gas Location and list the distance from working pad surface. If the location is partially or entirely within a HPH list the distance as '0' and provide the estimated acreage disturbance of that HPH by the location construction.

High Priority Habitat (HPH) Name:	Distance	Estimated Acreage Disturbed
Aquatic Native Species Conservation Waters	2822	0

List total size of disturbed acreage and disturbed High Priority Habitat (HPH) area (in acres) during the Oil & Gas Location construction and after interim reclamation.

	Total Acreage (acres)	Total HPH Acreage (acres)	Provide any further information regarding the location's HPH disturbance.
Construction	15.898	0	N/A
Post-interim Reclamation	6.979	0	

Provide the acreage of the existing land use types that occur within one mile of the Oil & Gas Location. Note: a circle with a one mile radius is approximately 2010 acres.

	Existing Acreage	Existing Acreage	Existing Acreage	Existing Acreage
Crop Land: Irrigated	0	Non-Irrigated	0	Conservation Reserve Program(CRP)
Non-Crop Land: Rangeland	1785	Forestry	0	Recreation
Subdivided: Industrial	0	Commercial	0	Residential
				640.15
				Other
				0

If any land use is industrial, provide a description of the use or operation of the industrial facilities.

N/A

If any land use is "Other", provide a description of the land use.

N/A

If any portion of the land use for the proposed oil and gas location includes Rangeland, Forestry, or Recreation, provide a list of the plant community or communities and estimated acreage disturbed for each:

	Estimated Disturbed Acreage	Estimated Disturbed Acreage	Estimated Disturbed Acreage	Estimated Disturbed Acreage
Disturbed Grassland	0	Shrub Land	0	Mountain Riparian
				Wetland Aquatic
				0

Provide a qualitative evaluation of incremental adverse impacts to ecosystems, including any plant communities, as a result of Oil and Gas Operations associated with the proposed Oil & Gas Location.

N/A

Soil Resources

List all soil map units that occur within the Oil & Gas Location and list the estimated total area (in acres) disturbance of each soil map unit.

NRCS Map Unit Name:	Estimated Disturbed Acreage
Bresser Sandy Loam, cool, 5 to 9 percent slopes	8.566
Renohill Clay Loam 4 to 8 percent slopes	6.907
Nunn Clay Loam 0 to 4 percent slopes	0.425

PUBLIC WELFARE

☒ This Oil & Gas Location lies within a Disproportionately Impacted Community as defined in the 100-series rules.

Building Units within 1-mile

0'-2,000' 2,001'-5,280'

Total number of Residential Building Units:	0	9
Total Number of non-school AND non child care center High Occupancy Building Units:	0	0
Total number of School Facilities:	0	0
Total number of Child Care Centers:	0	0

Recreation and Scenic Value

List all State Parks, State Trust Lands, or State Wildlife Area within 1-mile of the Oil & Gas Location.

N/A

List all Designated Outdoor Activity Areas within 1-mile of the Oil & Gas Location.

N/A

List all mapped trails that support any of the following recreational activities within 1-mile of the Oil & Gas Location: Hiking, Biking, Horseback Riding, Motorcycle Riding, ATV Riding, OHV, Nordic Skiing, Snowmobiling, or Snowshoeing.

N/A

AIR RESOURCES

Pre-Production Emissions

Complete the following chart based on the estimated total equipment emissions (in tons) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Criteria Pollutants by equipment type.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Process Heaters or Boilers	0	0	0	0	0	0	0
Storage Tanks	1.21	5.54	15.87	0	0	0	0
Venting or Blowdowns	0	0	0	0	0	0	0
Combustion Control Devices	1.05	4.79	0	0	0	0	0
Non-Road Internal Combustion Engines	24.52	5.28	1.95	0.04	0	882.31	0.01
Drill Mud	0	0	6.99	5.97	2.45	0.73	0
Flowback or Completions	1.08	4.93	23.5	19.94	8.18	0	0
Loadout	0	0	0.43	0	0	0	0

Production Emissions

Complete the following chart based on the estimated full facility equipment emissions (in tons) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Criteria Pollutants. The table should be filled out based on ONE year of operation.

	NOx	CO	VOCs	Methane	Ethane	CO2	N2O
Stationary Engines or Turbines	3.38	7.24	3.38	0	0	2343.12	0
Process Heaters or Boilers	2.68	2.25	0.15	0.05	0.08	2602.91	0

Storage Tanks	4.79	21.83	81.62	0	0	0	0
Dehydration Units	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	0	0	0	0	0
Separators	0	0	0	0	0	0	0
Fugitives			0.21	0.03	0	0	
Venting or Blowdowns	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0
Loadout	0	0	2.39	0	0	0	0
Non-Road Internal Combustion Engines	4.82	9.65	3.38	0.04	1.39	2343.12	0
Well Bradenhead	0	0	0	0	0	0	0
Well Maintenance	0	0	0	0	0	0	0

Diesel Vehicle Road Miles

Complete the following chart for diesel vehicle road miles during each stage of oil and gas location operations.

During Construction: 38

During Completions: 442896

During Drilling: 264680

During Interim Reclamation: 3020

During Production: 14640

PUBLIC HEALTH RESOURCES

Pre-Production Emissions

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location during the pre-production (construction, drilling, completions) stage for Hazardous Air Pollutants (HAP).

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Process Heaters or Boilers	0	0	0	0	0	0	0	0	0	0
Storage Tanks	523.41	0	0	0	2469.77	0	0	0	0	2993.18
Venting or Blowdowns	0	0	0	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	8.63	0	0	0	0	0	0	13.12	0	21.75
Drill Mud	55.56	35.29	4.53	11.14	0	1.39	0	0	0	107.91
Flowback or Completions	185.53	117.87	15.14	37.2	0	4.65	0	0	0	360.39
Loadout	1.49	0	0	0	13.14	0	0	0	0	14.63

Production Emissions

Complete the following chart based on the estimated total equipment emissions (in lbs) for the Oil & Gas Location once the Oil & Gas Location has entered the production stage, for Hazardous Air Pollutants (HAP). The table should be filled out based on ONE year of operation.

	BEN	TOL	ETH	XYL	NHE	TMP	H2S	FDE	MET	HAP
Stationary Engines or Turbines	0	0	0	0	0	0	0	0	0	0
Process Heaters or Boilers	0.11	0.18	0	0	96.62	0	0	4.03	0	100.94
Storage Tanks	2544.78	0	0	0	12616.59	0	0	0	0	15161.37
Dehydration Units	0	0	0	0	0	0	0	0	0	0
Pneumatic Pumps	0	0	0	0	0	0	0	0	0	0
Pneumatic Controllers	0	0	0	0	0	0	0	0	0	0
Separators	0	0	0	0	0	0	0	0	0	0
Fugitives	1.29	3.85	0.67	5.02	8.42	0.21	0	0	0	19.46
Venting or Blowdowns	0	0	0	0	0	0	0	0	0	0
Combustion Control Devices	0	0	0	0	0	0	0	0	0	0
Non-Road Internal Combustion Engines	62.28	0	0	0	0	0	0	197.78	120.63	380.69

Loadout	8.32	0	0	0	73.58	0	0	0	0	81.9
Well Bradenhead	0	0	0	0	0	0	0	0	0	0
Well Maintenance	0	0	0	0	0	0	0	0	0	0

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated total pre-production hazardous air pollutant emissions.

Based on the level of emissions expected to be released during the implementation of the pre-production phase of this proposed project, the contribution to past, present, and reasonably foreseeable projects represents a minor cumulative increase to emissions in the air resources within the project area.

Provide a qualitative evaluation of any potential acute or chronic, short- or long-term incremental impacts to public health as a result of the estimated annual production hazardous air pollutant emissions.

Based on the level of emissions expected to be released during the implementation of the production phase of this proposed project, the contribution to past, present, and reasonably foreseeable projects represents a minor cumulative increase to emissions in the air resources within the project area.

Dust Impacts

The following are the estimated number of truck trips traveling on or off the Oil & Gas Location.

Total	During Construction	During Drilling	During Completions	During Interim Reclamation	During Production
Monthly	1980	3600	8960	165	60
Annual	1980	3600	8960	200	720

Estimated total pounds (lbs) of proppant to be used during completions activities. 4188000

Provide the type of proppant(s) that are planned to be used during completions activities.

100 Mesh sand and 40/70 Sand

Provide an evaluation of the proposed proppant management system that will be used to minimize dust during completions activities, including the estimated amount of silica dust that will leave the Oil & Gas Location.

When handling sand used in hydraulic fracturing operations, GMT's vendors will use an advanced Containerized Sand System for proppant delivery, storage on location, and delivery to the blender and frac fluid system. The containers use gravity (not pneumatics) to drop sand directly into the blender sand hopper, basically eliminating dust generation. This system also removes people and equipment from the proppant handling operations during fracturing treatments, considerably reducing exposures and EHS risks to individuals from dust generated by older sand handling equipment (like conveyor belts). Remote controls are used to efficiently open and close sand gates on the bins to further reduce silica dust creation. Zero pounds of silica dust are anticipated to migrate off the Ragged 6-64 4 location during completions operations.

EXISTING OIL & GAS

Total number of oil & gas locations within 1-mile of the Oil & Gas Location:

	Total Number of Locations		Total Number of Wells
Active, built	<u>0</u>	Active, built	<u>0</u>
Permitted by COGCC, unbuilt	<u>0</u>	Permitted by COGCC, unbuilt	<u>1</u>
Permitted by Relevant Local Government & not COGCC, unbuilt	<u>0</u>	Proposed	<u>0</u>
Proposed	<u>1</u>	Plugged and Abandoned	<u>3</u>

Total acreage disturbance during construction of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location: 15.898

Source for acreage total:

- ☐ Field Observation/Measurement
- ☒ COGCC Location Files
- ☐ Aerial Photos/Other
- ☐ Other

If "Other" is selected, please describe the source use to determine the acreage total for construction disturbance of the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

N/A

Total permitted capacity of on-location storage (in number of pits and tanks) of the active and proposed oil & gas locations within 1-mile of the Oil & Gas Location :
NOTE: providing the existing number of pits and tanks on surrounding existing locations is optional.

Source for storage totals:

- ☐ Field Observation/Measurement
☒ COGCC Location Files
☐ Aerial Photos/Other
☐ Other

	Permitted Onsite Storage Capacity	Existing Onsite Storage Capacity
Oil	10	0
Condensate	0	0
Produced Water	4	0
Pits	0	0

If "Other" is selected, please describe the source use to determine the tank totals for the active and proposed oil & gas locations within 1-mile of the proposed Oil & Gas Location.

N/A

OIL & GAS DEVELOPMENT PLAN-SCALE DATA

List High Priority Habitats (HPH) that are estimated be disturbed by the construction of new roads, including access roads, pipelines, and utilities for this OGDG, along with the estimated disturbed acreage of each HPH.

No HPH Identified

List the total estimated of disturbed acreage and the total disturbed High Priority Habitat (HPH) area (in acres) during construction and the acreage that will remain disturbed after interim reclamation of the following for the entire OGDG:

	Construction			Post-interim Reclamation	
	Total Acreage (acres)	Total HPH Acreage (acres)		Total Acreage (acres)	Total HPH Acreage (acres)
New roads, including access roads	1.136	0	New roads, including access roads	1.136	0
Pipelines	0	0	Pipelines	0	0
Utilities	0	0	Utilities	0	0

Provide any further information regarding the HPH disturbance from the construction of new roads, including access roads, pipelines, and utilities for this OGDG.

N/A

Number of miles of the existing lease road that are planned to be used to access these location(s): 0

BENEFICIAL IMPACT INFORMATION

Equipment and Facility Removal

Total number of existing wells that are planned to be plugged and abandoned as part of this OGDG: 0

Total number of existing locations that are planned to be closed and undergo final reclamation as part of this OGDG: 0

Total number of acres that are planned to be reclaimed through the closing of existing locations: 0

Total number of existing pits that are planned to be closed and undergo final reclamation as part of this OGDG: 0

Estimated number of vehicle trips that are planned to be prevented from the above mentioned facility closures and equipment upgrades (on an annual basis): 0

Total number of tanks planned to be removed from existing locations through the approval of this OGDG:

Oil Tanks: 0

Condensate Tanks: 0

Produced Water Tanks: 0

Provide a qualitative evaluation of any incremental beneficial impacts to the surrounding community directly and indirectly from this OGDG.

There will be beneficial impacts to the surrounding community in the form of taxes paid by the operator.

Provide a qualitative evaluation of any incremental beneficial impacts to the surrounding wildlife and ecosystems directly and indirectly from this OGD.

N/A

MITIGATION INFORMATION

No Mitigation Measures Listed

OPERATOR COMMENTS AND SUBMITTAL

Print Name: Andrea Gross

Title: Permit Agent

Email: agross@upstreampm.com

Date: 10/24/2022

Based on the information provided herein, this Cumulative Impacts Data Identification Form 2B complies with COGCC Rules and is hereby accepted into the Cumulative Impacts Data Evaluation Repository (CIDER database).
Contact OGLA Staff for consultation.

COGCC Approved: _____ **Director of COGCC** Date: _____

Attachment Check List

Att Doc Num

Name

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Total Attach: 0 Files

General Comments

User Group

Comment

Comment Date

OGLA	Returned to Draft for Completeness.	11/18/2022
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Total: 1 comment(s)